PHENIX Technical Support 2006

PHENIX
WEEKLY PLANNING

2/9/06

Don Lynch

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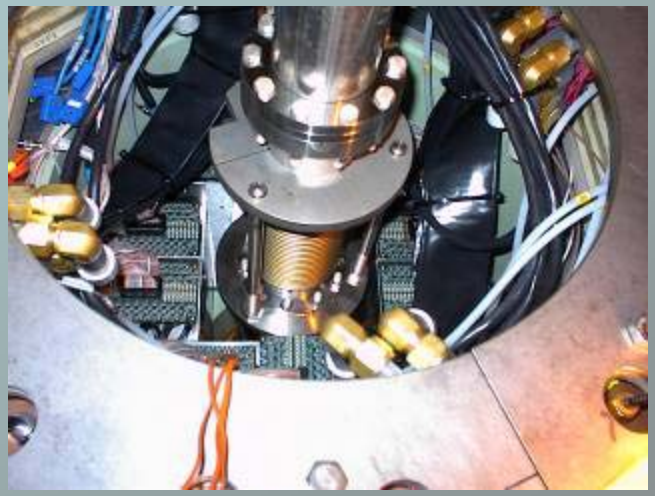
Prep Schedule for Run 6

- BBC N&S dried, tested re-installed, final tested **[DONE]**
- MuTr FEE and anode purge lines dried **[DONE]**
- MuTr HV & LV repairs and tests **[DONE]**
- Install Lampshades on MMS **[DONE]**
- Receive MPC South **(Received 1/8/06)**
- Prepare EC for move to IR (carpenters) **[DONE]**
- Re-install seismic restraints on WC **[DONE]**
- Prepare MPC South (install LED's, bench elec. tests) **[DONE]**
- Uninstall TOF West Installation platform **[DONE]**
- Install MPC South **[DONE]**
- Install HBD rack (lower only) **[DONE]**
- Move MUID collar to IR **[DONE]**
- Install MPC cable tray **[DONE]**



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Prep Schedule for Run 6

- Remove upper HBD I-beams, use fg unistrut for now **[DONE]**
- EC roll in Carpenters to do platforms **[DONE]**
- Pink sheets **[DONE]**
- MPC South installation **[DONE]**
- CM area sweep for magnet test **[DONE]**
- Magnet tests **[DONE]**
- Continue blue sheets **[DONE]**
- Connect EC Services **[DONE]**
- Install shield wall **[DONE]**
- DC repairs **[DONE]**
- Move MMS North **[DONE]**
- Install MUID collar **[DONE]**
- Fabricate BLM Test Diode holders **[in proce**
- Fabricate RXNP Mag Test Fixture **[DONE]**
- Complete CM area HBD plumbing **[DONE]**

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Prep Schedule for Run 6

Week of Feb. 6 – Feb. 10, 2006

- RXNP magnet tests **[ready?]**
- Install plug door **[DONE]**
- Start of PHENIX watch shifts **[started]**
- Start flammable gas flow
- Blue ring ready for beam Feb. 6, limited IR access **[beam circulating]**
- All up commissioning **[in process]**
- Start of Run Party **[tomorrow]**

Week of Feb. 13- Feb. 17, 2006

- Yellow ring ready for beam
- All up commissioning

Week of Feb. 21 – Feb. 24, 2006 (Pres. Day Holiday 1/20/06)

- Install Beam Loss Monitor
- Install MPC electronics on eyebrow
- Start of run shifts

Week of Feb. 27 – Mar. 4

- Start physics runs

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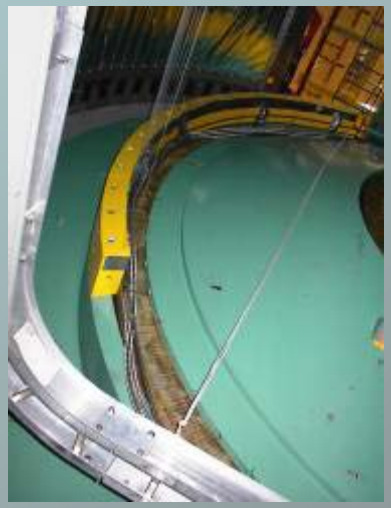
Completed Tasks



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Remaining Tasks

- MPC test and fix
- MPC dry air supply manidfold
- RXNP detector PMT magnet tests
  - Fabricate test fixture
  - Run tests
- BLM test
  - Fabricate fixture
  - Install for run
  - Un-install when HBD is installed
- Start flammable gas
- Start of Run party
- Beam in yellow ring
- Start recording physics
- New LN2 Dewar for BBC cooling gas (replacing dry air)
- Install HBD (~March-April prototype and/or ~May ½ final design)

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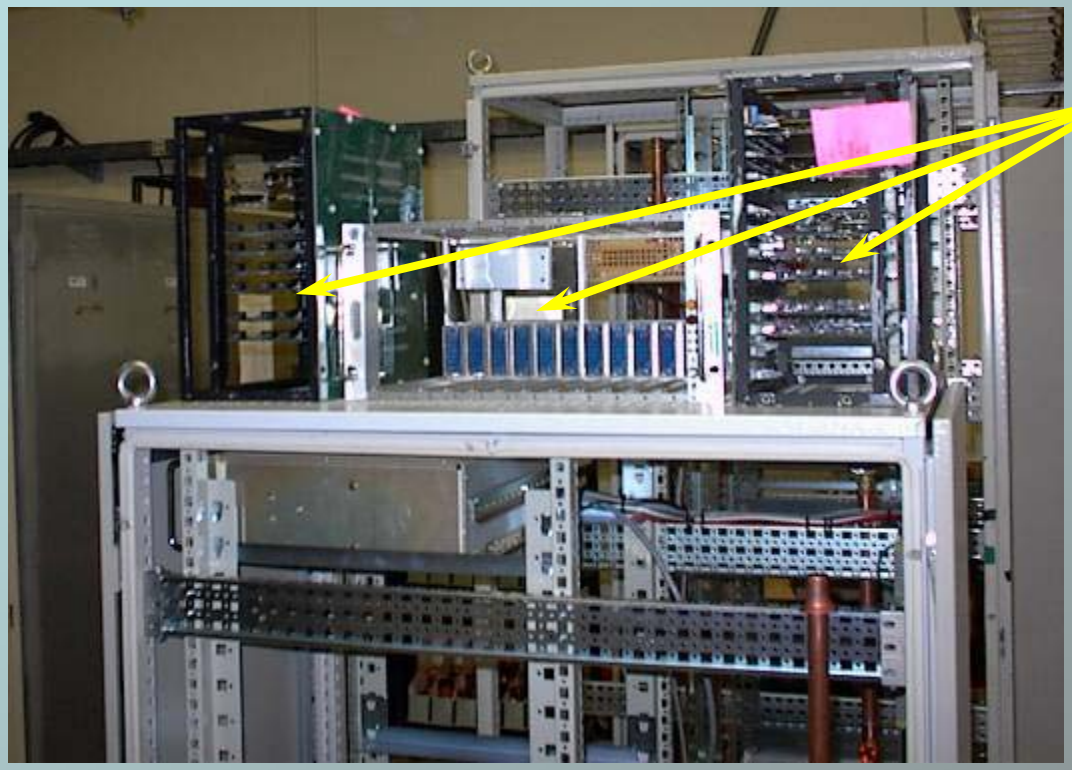
MPC Installation



MPC electronics to be on top of MuTr rack on eyebrow

Electronics not ready yet

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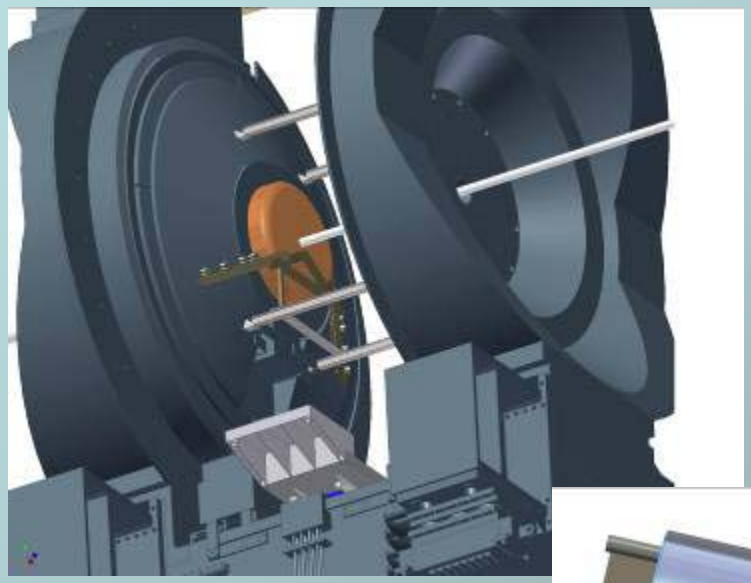
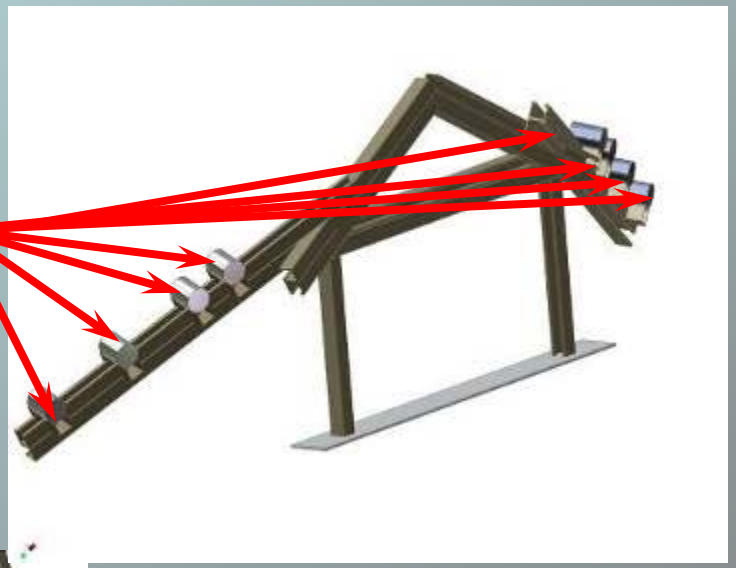
RXNP PMT in magnetic field tests





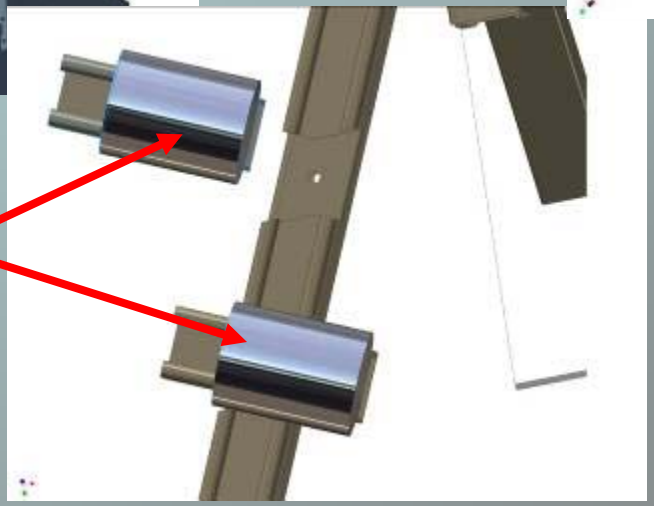


Photo-multiplier Tubes (PMT's)

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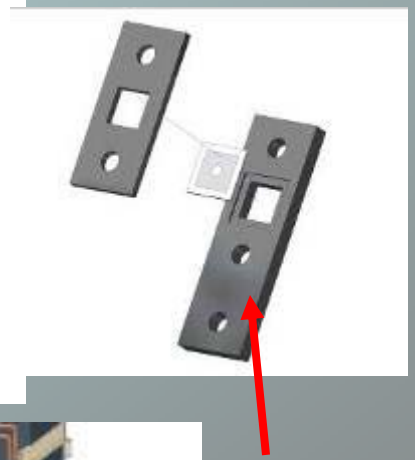
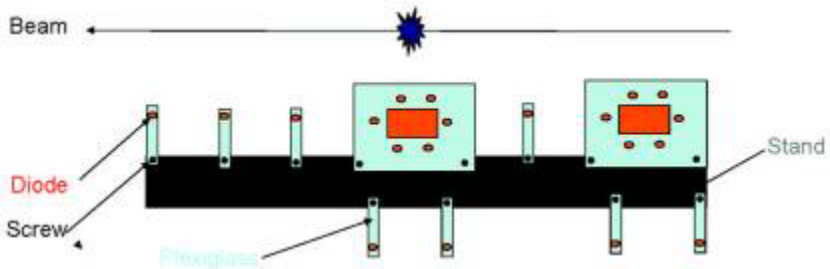
Beam Loss Monitor Tests

- 3 BLM's
- 2 Chipmunks
- 2 stripixel detector samples
- 16 diodes (8 small, 8 large)
- 2 thermorecorder buttons



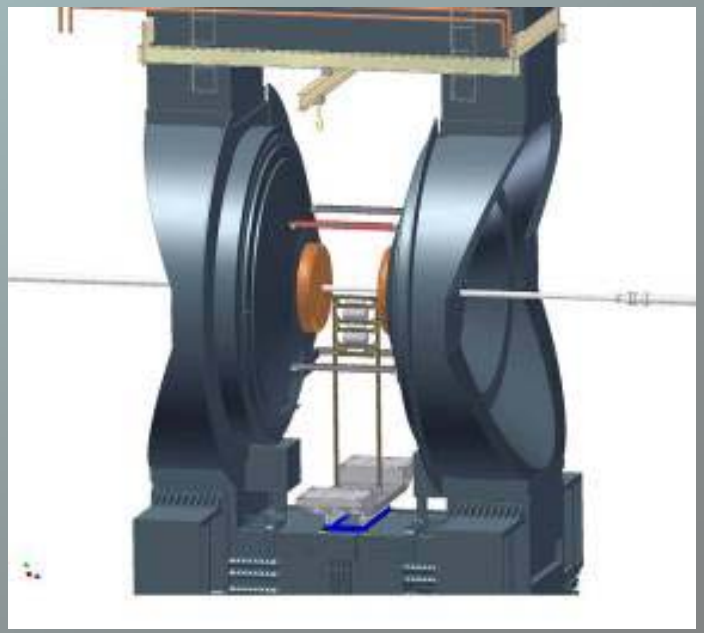
Diode Holder

Idea for Mechanical Support of the Sensors/Diodes for Radiation Tests at IR



30cm /8 diodes= every 3.75 cm you have one diode

* 30 cm is the length of the silicon strip frame



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Other Projects

TOF West

- No further work until next shutdown

HBD

- All gas work inside IR to be completed prior to end of shutdown
- Will need new He bags?
- Plan for installation of ½ final detector late in run 6 using lower rack only
- Plan B – install prototype during run 6
- Need to design & fabricate cable support structure for prototype and final design

Bridge Utilities

- No water until next summer. Shutoff valves to be closed and posted until manifolds are tested

MPC North

- New enclosure & fixture design to be based on lessons learned from south installation

RXNP

- No design info yet?

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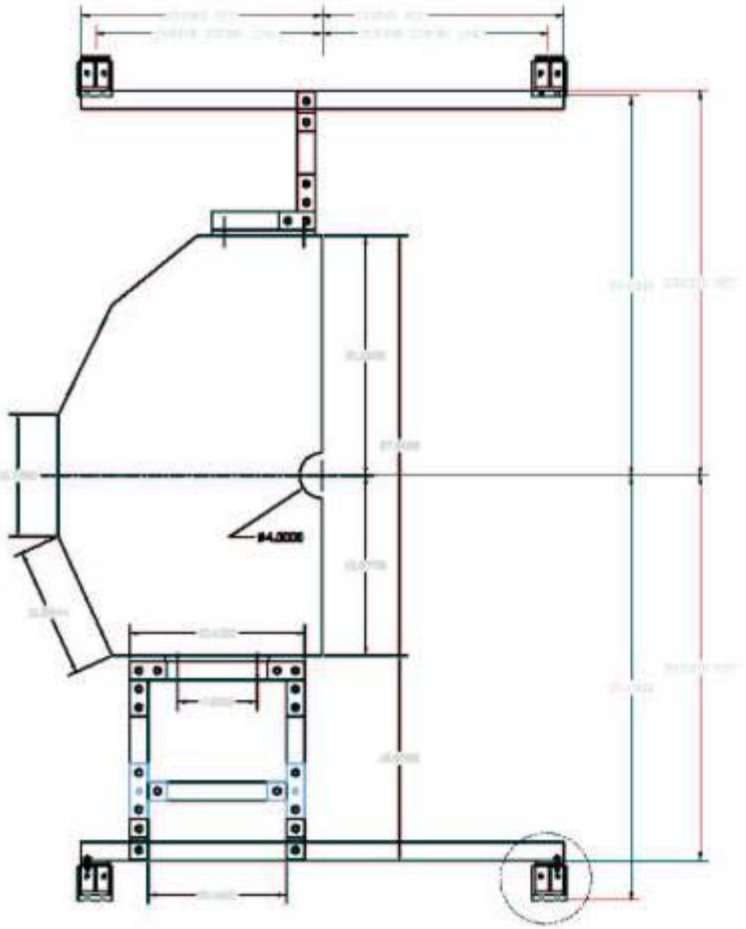
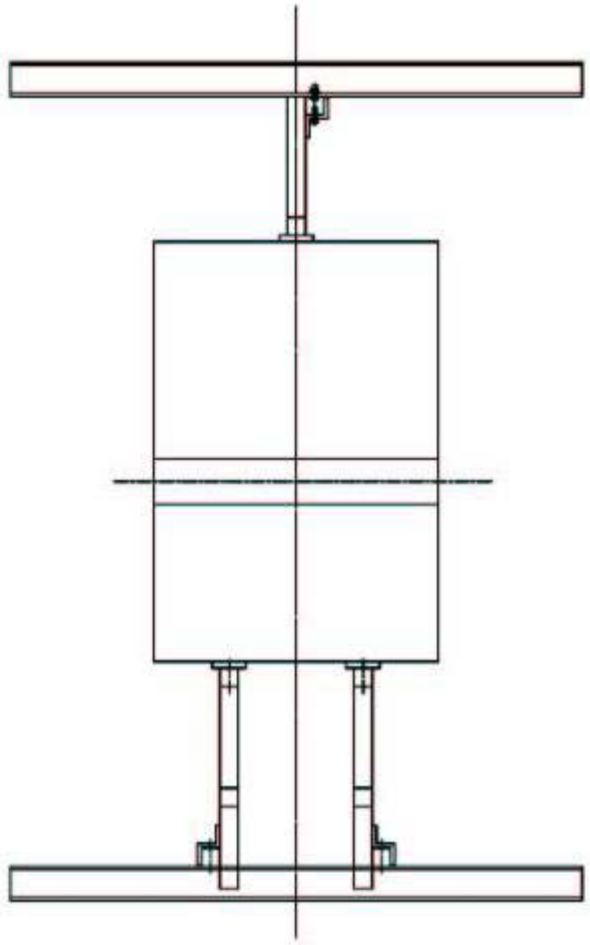
HBD Prototype Mounting





Prototype can not use final design mounting due to differences in location of connectors and other basic design differences.

Final HBD design is not yet fixed.

Prototype mounting to be fabricated from fg unistrut.

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LN_2 Storage Dewar for BBC

Acme Cryogenics 6000 Gallon vessel

23' long x 10'4" high, 7' wide footprint 219psig MAWP, we would set MOP to 125psig.
Original Mfr.:
Linde, NB #6363 ser.#206
Remanufactured by Chart

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LN_2 Supply

- Acquire ASME NB certified 6000 gal LN_2 Dewar
- CA internal cryo and mechanical safety review
- Modify gas pad layout to accommodate dewar
- Install dewar on pad

LN2 dewar to be located on south side of pad beyond CO2 unit shown here

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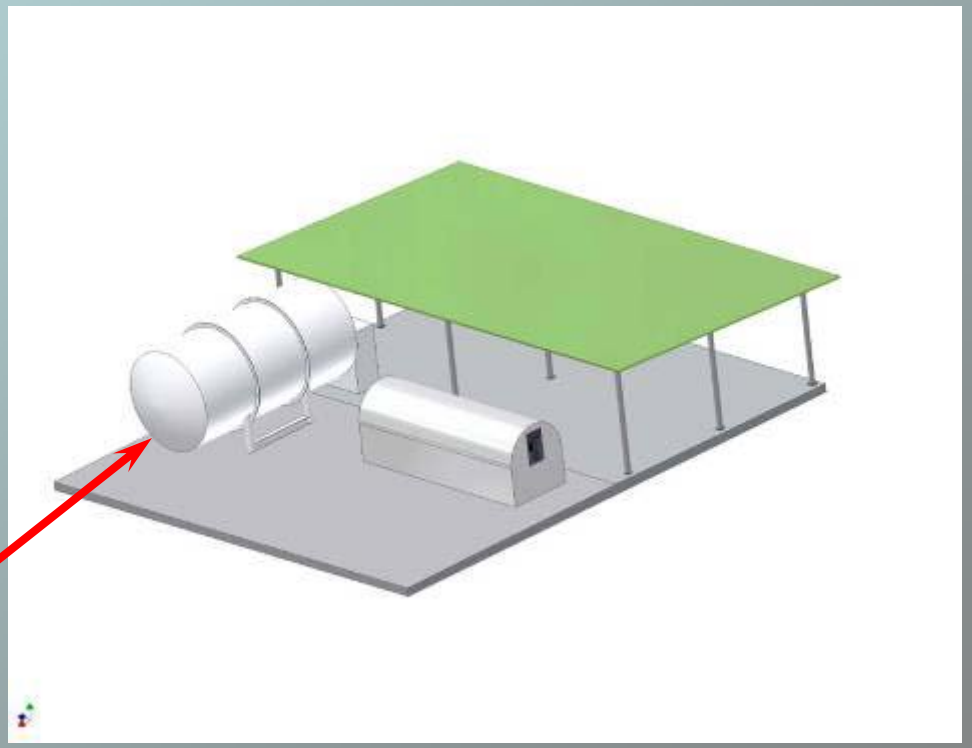
LN_2 Storage Dewar for BBC



LN_2 Vessel to go here

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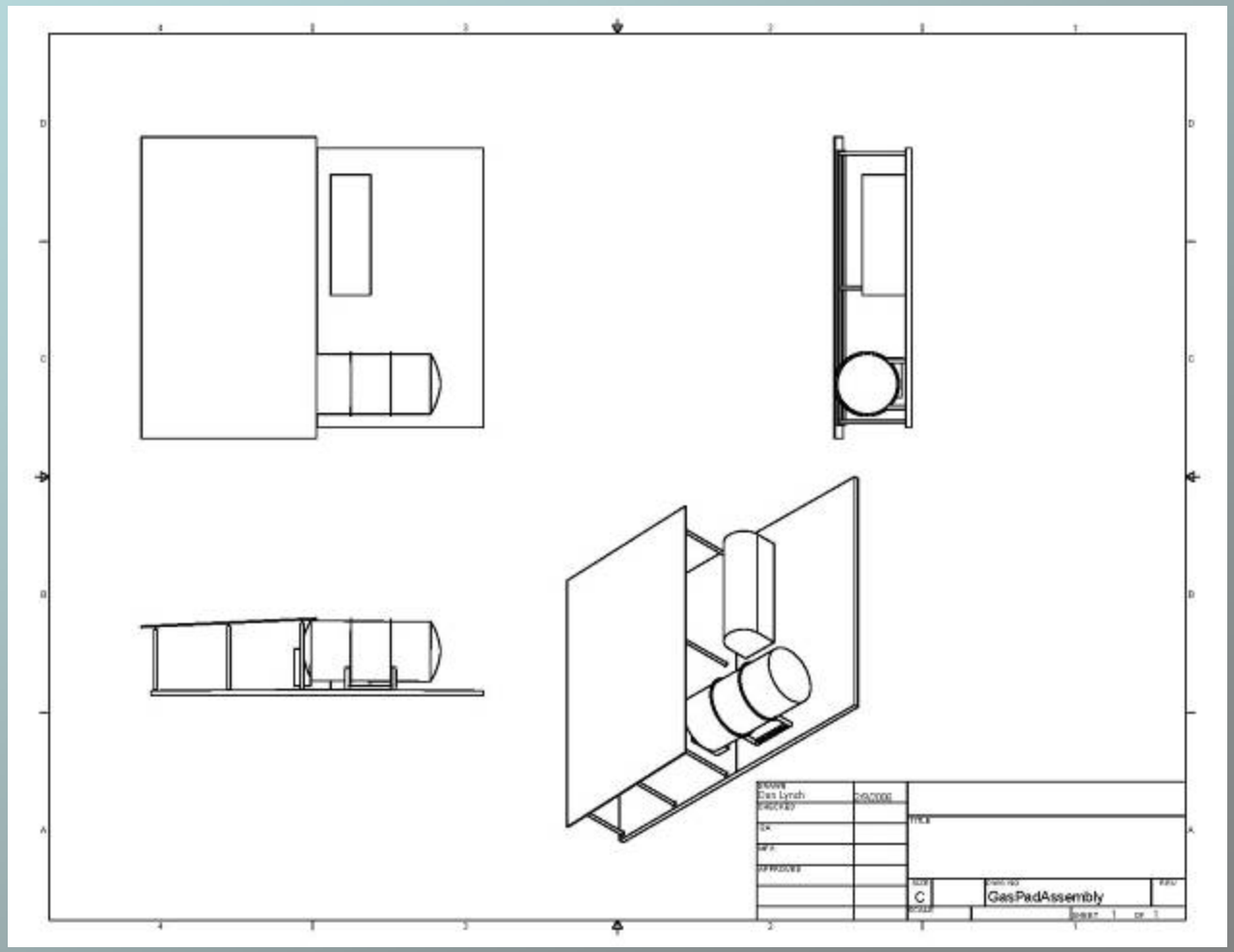
LN_2 Storage Dewar for BBC

New Gas Pad Design.
Dimensions and access to be added.
Estimated weight of 6000 gallon tank 30 tons when full, 10 tons when empty.

Experimental safety review required.



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C-A Tasks

Current Tasks

- Support for LN_2 dewar installation
- General run support

Tasks for Shutdown 2006

- Install access platforms from EC top north and MMS
- Replace emergency fan louvres
- Rewire/add IR ceiling lights on emergency power
- Replace WC sliding platform hoisting cables
- Analyze/balance rack water distribution
- Mixing house exhaust fan maintenance

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Shutdown 2006

We expect a short shutdown with a full plate of work

- June '06: end run 5, prep for start of shutdown, prep EC for move to AH
- July '06: TOF West installation, HBD installation
- Aug. '06: MPC North installation, RXNP installation
- Sep. '06: Detector subsystems maintenance, roll EC in, prep for run 6

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PHENIX Engineering & Tech Support Web Pages

Links for weekly planning meeting slides, long term planning and other technical info can be found from the web site:

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm

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